

# Time for a Change: Exploring New Avenues for Email Collection Preservation



Smithsonian  
*Libraries and Archives*

Lynda Schmitz Fuhrig  
Digital Archivist

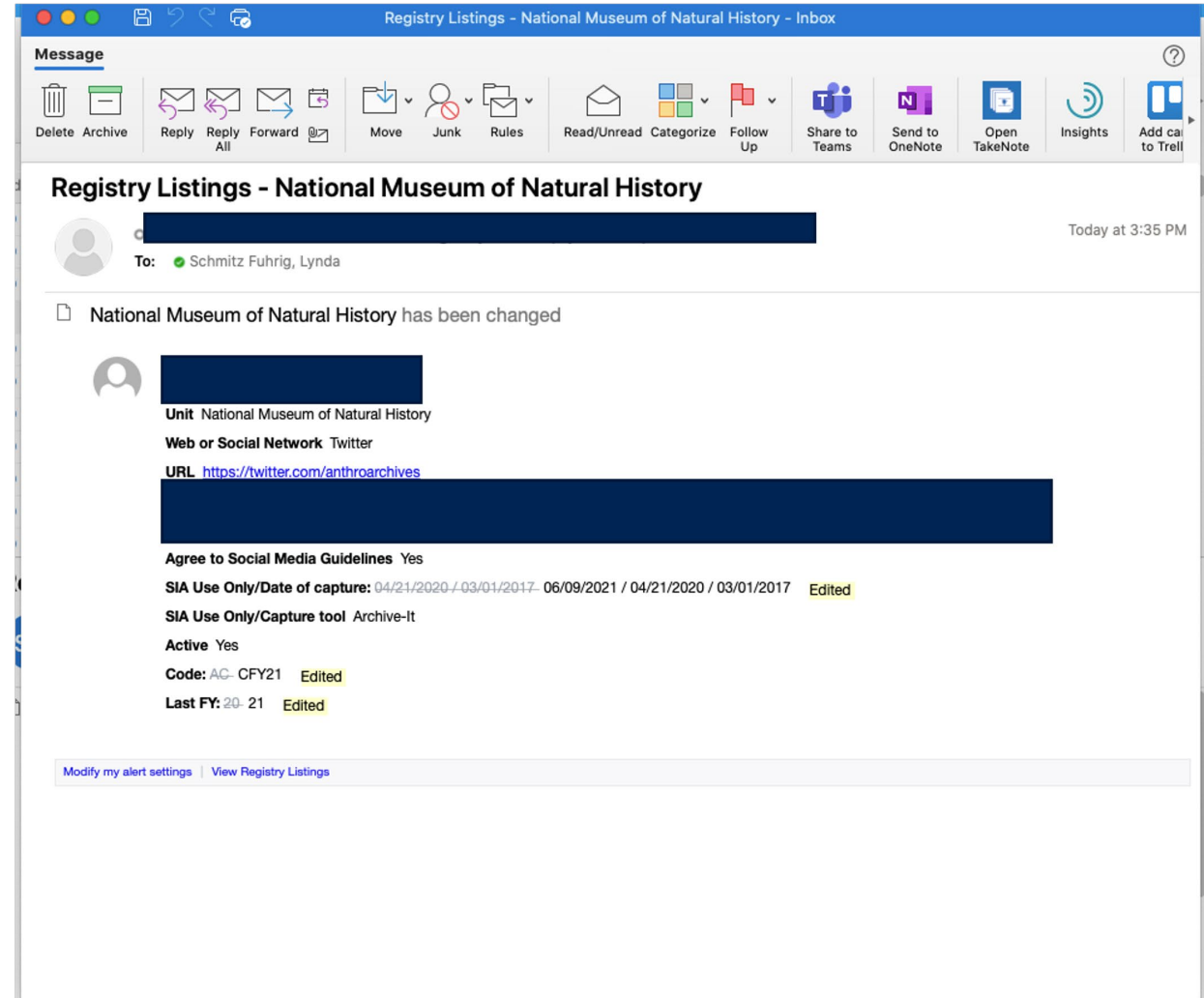
Email Archiving Symposium  
June 15, 2023

# Through the Years



# Accessioned accounts

- Role at the Smithsonian or specific project – Secretary, undersecretaries, directors, curators, etc.
- When the account holder leaves the Smithsonian, but can be taken in sooner
- No weeding done by SIA except Junk Email or Deleted Items folders in some cases
- 15-year-access restriction. PII permanently restricted



The screenshot shows an email interface with a toolbar at the top containing icons for Delete, Archive, Reply, Forward, Move, Junk, Rules, Read/Unread, Categorize, Follow Up, Share to Teams, Send to OneNote, Open TakeNote, Insights, and Add call to Trell. The email subject is "Registry Listings - National Museum of Natural History" and it was received "Today at 3:35 PM". The sender is "Schmitz Fuhrig, Lynda". The message body contains a notification: "National Museum of Natural History has been changed". Below this is a profile card for a user with a redacted name, listing their unit as "National Museum of Natural History", web or social network as "Twitter", and URL as "https://twitter.com/anthroarchives". Other details include "Agree to Social Media Guidelines: Yes", "SIA Use Only/Date of capture: 04/21/2020 / 03/01/2017- 06/09/2021 / 04/21/2020 / 03/01/2017 Edited", "SIA Use Only/Capture tool: Archive-It", "Active: Yes", "Code: AC- CFY21 Edited", and "Last FY: 20- 21 Edited". At the bottom of the message are links for "Modify my alert settings" and "View Registry Listings".

# CERP in 2005

- Smithsonian Institution Archives and Rockefeller Archives Center pilot
- Three Smithsonian offices
- Practices with both email and digital records
- SI migrating from GroupWise to Outlook
- Tested various tools and worked with another project at the State Archives of North Carolina, KY, and PA - EMCAP



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THE ROCKEFELLER ARCHIVE CENTER  Smithsonian Institution Archives

HOME PARTICIPANTS TIMETABLE PRO

## The Collaborative Electronic Records Project

**Of Note**

- ◊ CERP has concluded its work. While the team has officially disbanded, the website will be available indefinitely and updated when necessary.

**Events**

- ◊ November 2008  
CERP held a symposium that brought together experts that included the National Archives and Records Administration, North Carolina Department of Cultural Resources & EMCAP Project, University of North Carolina - Chapel Hill/RENCI, and Senate staff. The group discussed experiences in email and digital preservation and future directions. See some of the [presentations](#) and [proceedings](#).
- ◊ August 2008  
Society of American Archivists Research Forum. **Digital Dilemmas: Archiving E-Mail** was presented in the Format Foundations portion of this year's forum in San Francisco, Calif, as a [talk](#) and [poster](#).
- ◊ Panel session at the [Society of American Archivists 2008](#) conference. [Capturing the E-Tiger - New Tools for Email Preservation](#). Panelists were CERP, NC State Archives, and the Kentucky Department for Libraries and Archives.
- ◊ [Australian Society of Archivists 2008 conference](#), Perth, Australia.  
Rockefeller Archive Center Executive Director Emeritus Dr. Darwin Stapleton discussed **Making a Way Out of No Way: The Collaborative Electronic Records Project of the Rockefeller Archive Center and the Smithsonian Institution Archives**.
- ◊ June 2008  
Pre-conference workshop at the [Association of Canadian Archivists 2008](#) annual conference. **Digital Dilemmas: Archiving E-Mail** in Fredericton, New Brunswick. The day-long workshop covered all aspects of the project, from record discovery and appraisal through preservation and finally archival storage. Participants had hands-on

**New Content**

- ◊ SIA developed a Java-based script that automatically generates an RDF description of the records. [CERP overview](#) summarizes the three phases.
- ◊ The [Email Account XML Schema](#) is now available. It includes a schema for the introduction, and an RDDDL diagram of the schema. The schema is technical and will be most meaningful for those with a technical background.

We encourage interested organizations to contact Project Manager Kelly Eubank ([kelly.eubank@si.edu](mailto:kelly.eubank@si.edu)) in the archival organizations participating in the project.

- ◊ [Friends of CERP, Winter 2009](#)
- ◊ [Tools used by CERP](#) - November 2008
- ◊ [Record Retention and Disposition Guideline](#)

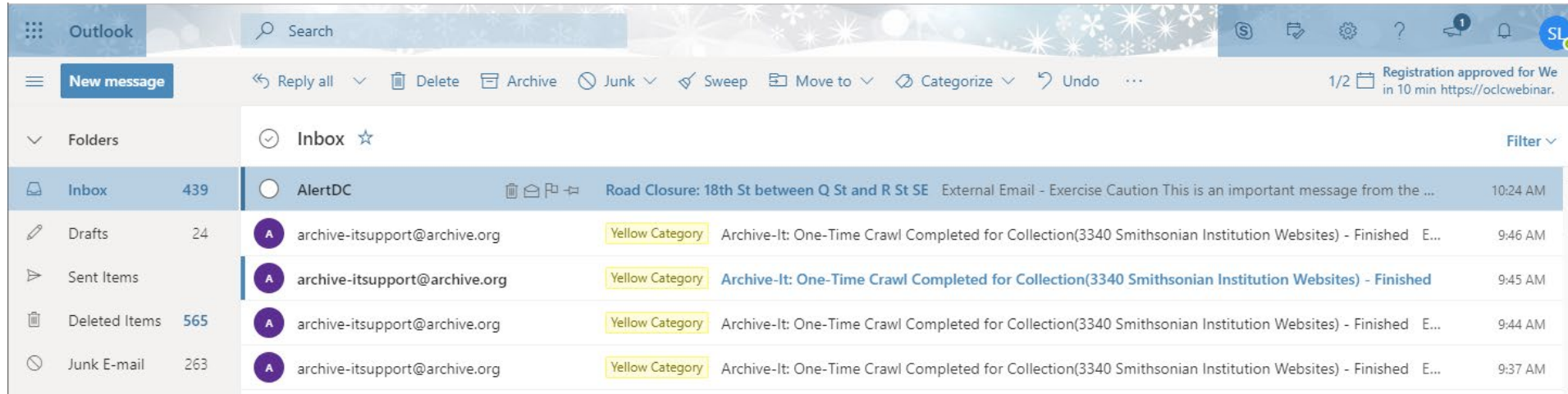
**Background**

The [Smithsonian Institution Archives](#) (SIA) and the Rockefeller Archive Center (RAC) are project to develop, test, and share the technical tools, standards, and methodologies developed and tested electronic records preservation strategies, and that drew on the experiences of both institutions.

Archival institutions, which provide permanent access to records for future generations, are encountering the loss of digital forms of information, the long-term preservation of which is a challenge. Looking at the first decade of the 21st century, the loss of digital records is a significant concern.

Yet few institutions have taken significant steps to address digital preservation in the archival world. Much of the

# Our Approach



- Open formats
- Anyone could adopt/adapt
- Accounts, not individual emails
  - Easier manageability at this level



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# CERP Parser

The screenshot shows a web-based application interface for parsing email accounts. A central dialog box titled "E-Mail Account Parsing" is overlaid on a background of XML code. The dialog box contains the following text:

**E-Mail Account Parsing**

All Account directories to be parsed -- and no subdirectories other than properly formed Account directories -- should be located in a directory named "Email\_Accounts" which itself must be located in the same directory as the Parser software. Each Account directory must contain all folder subdirectories that you wish included in the parse. Examples might include Inbox and/or Sent folders. Any folder may itself contain subdirectories representing sub-folders. Within any folder or subfolder, the file containing email messages to be parsed (one mbox file per folder subdirectory) must be in "mbox" format, with extension ".mbox".

Choose the account directory you wish to parse from the following drop-down list of available candidate accounts that appear to be well-formed.

Once you have chosen the desired target account, press the "Proceed with parsing" button. If the chosen account has already been parsed, you will be asked whether or not you wish to reparse it.

[See help pages for more detail](#)

Choose Account:

Current Parse Status

Parsing initiated 7 January 2015 for C:\EmailParser\Email\_Accounts\Carl\_backup\_messagesave  
Begin Parsing: Calendar at 10:18:06 am  
34 messages parsed  
Done Parsing: Calendar 10:18:08 am  
Begin Parsing: DArInfo Data at 10:18:08 am  
1 messages parsed  
Done Parsing: DArInfo Data 10:18:08 am  
Begin Parsing: Data Done at 10:18:08 am ... 28 messages parsed

The background XML code includes elements like <Account>, <Folder>, <Message>, <Header>, and <Value>.

# Preservation

- Preservation output through Email Account XML Schema (EAXS) using the parser
- Human and machine readable but not “pretty”

```
Carl_messagesave(Carl S.aa.xml) - <Oxygen/> XML Editor
Document Window Help
Saxon-EE
Carl S.aa.xml* x
46509 </Hash>
46510 </Message>
46511 <Message>
46512 <RelPath>.\Inbox</RelPath>
46513 <LocalId>1190</LocalId>
46514 <MessageId><![CDATA[<7A06988C8B0AED4F86EA77B52A3A60BE98A4E08988@SI-MSEV03.US.SINET.SI.EDU]]></MessageId>
46515 <MimeVersion>1.0</MimeVersion>
46516 <OrigDate>2011-09-20T17:49:29-04:00</OrigDate>
46517 <From><![CDATA["SI Email Announcements" <SIAnnounce@si.edu]]></From>
46518 <Sender><![CDATA["SI Email Announcements" <SIAnnounce@si.edu]]></Sender>
46519 <To><![CDATA["SI-GEO-FtPierce, FL" <SI-GEO-FtPierce@si.edu,
46520 "SI-GEO-National Capital Region" <SI-GEO-NCR@si.edu,
46521 "SI-GEO-NYC All Sites" <SI-GEO-NYC@si.edu,
46522 "SI-GEO-NZP-SCBI Front Royal, VA" <SI-GEO-NZP-SCBI@si.edu,
46523 "SI-GEO-Remote Locations" <SI-GEO-RemoteLocations@si.edu,
46524 "SI-GEO-SAO All Sites" <SI-GEO-SAO@si.edu,
46525 "SI-GEO-SERC Edgewater, MD" <SI-GEO-SERC@si.edu,
46526 "SI-GEO-STRI Panama" <SI-GEO-STRI@si.edu]]></To>
46527 <InReplyTo><![CDATA[<F66362F0CA446646AC625ADC7FBFE9FF94C33D9AE9@SI-MSEV03.US.SINET.SI.EDU]]></InReplyTo>
46528 <References><![CDATA[<7A06988C8B0AED4F86EA77B52A3A60BE98A4D11CEC@SI-MSEV03.US.SINET.SI.EDU
46529 <F66362F0CA446646AC625ADC7FBFE9FF94C33D9AE9@SI-MSEV03.US.SINET.SI.EDU]]></References>
46530 <Subject>Event: Health - Seasonal Flu Vaccination Outreach</Subject>
46531 <Header>
46532 <Name>Date</Name>
46533 <Value>Tue, 20 Sep 2011 17:49:29 -0400</Value>
46534 </Header>
46535 <Header>
46536 <Name>x-ms-exchange-organization-authsource</Name>
46537 <Value>SI-MSEHUB-N02.US.SINET.SI.EDU</Value>
46538 </Header>
46539 <Header>
46540 <Name>Thread-Index</Name>
46541 <Value>AQJmQDtxqB2Nj7VK3bra9I4YJgTZxwJNzjRAqcVRzw=</Value>
46542 </Header>
46543 <Header>
46544 <Name>x-ms-exchange-organization-authas</Name>
46545 <Value>Internal</Value>
46546 </Header>
46547 <Header>
46548 <Name>x-ms-exchange-organization-authmechanism</Name>
46549 <Value>04</Value>
46550 </Header>
46551 <Header>
46552 <Name>acceptlanguage</Name>
46553 <Value>en-US</Value>
46554 </Header>
46555 <Header>
46556 <Name>X-Mailer</Name>
46557 <Value>Microsoft Outlook 14.0</Value>
46558 </Header>
46559 <MultiBody>
46560 <ContentType>multipart/alternative</ContentType>
46561 <BoundaryString>----=_NextPart_000_02D0_01CF9D2B.3EA55190</BoundaryString>
46562 <OtherMimeHeader>
46563 <Name>Content-Language</Name>
46564 <Value>en-us</Value>
46565 </OtherMimeHeader>
46566 <Preamble>This is a multipart message in MIME format
Text Grid Author
save(Carl S.aa.xml) Validation successful
```

# CERP Parser



**E-Mail Account Parsing**

All Account directories to be parsed -- and no subdirectories (other than properly formed Account directories) -- should be located in a directory named "Email\_Accounts" which itself must be located in the same directory as the Parser software. Each Account directory must contain all folder subdirectories that you wish included in the parse. Examples might include InBox and/or Sent folders. Any folder may itself contain subdirectories representing sub-folders. Within any folder or subfolder, the file containing email messages to be parsed (one mbox file per folder subdirectory) must be in "mbox" format, with extension ".mbox".

Choose the account directory you wish to parse from the following drop-down list of available candidate accounts that appear to be well-formed.

Once you have chosen the desired target account, press the "Proceed with parsing" button. If the chosen account has already been parsed, you will be asked whether or not you wish to reparse it.

[See help pages for more detail](#)

Choose Account:

Current Parse Status

Parsing initiated 7 January 2015 for C:\EmailParser\Email\_Accounts\Carl\_backup\_messagesave

Begin Parsing: Calendar at 10:18:06 am  
134 messages parsed  
Done Parsing: Calendar 10:18:08 am  
Begin Parsing: DArInfo Data at 10:18:08 am  
1 messages parsed  
Done Parsing: DArInfo Data 10:18:08 am  
Begin Parsing: Data Done at 10:18:08 am ... 28 messages parsed

New Session Configure Toggle Halos Profiler Memory Terminate XHTML 639/309 ms



# DArcMail (Digital Archive for eMail) Suite

DArcMail v2.0

Quit Load Delete Export Browse

### Load DArcMail Data

Account Name:

Account Directory:  
 Browse

Select one or all folders: ALL FOLDERS ▾

Store attachments externally?  
 Yes  No

Reset Load Data

DArcMail v2.0

Quit Load Delete Export Browse

Account Message Address/Name Results

Sort Order  Oldest first  Newest first

Message status  Any  Selected  Unselected

Global Id

Date From

Date To

Folder ALL FOLDERS ▾

Subject Line

From Line

To Line

Cc Line

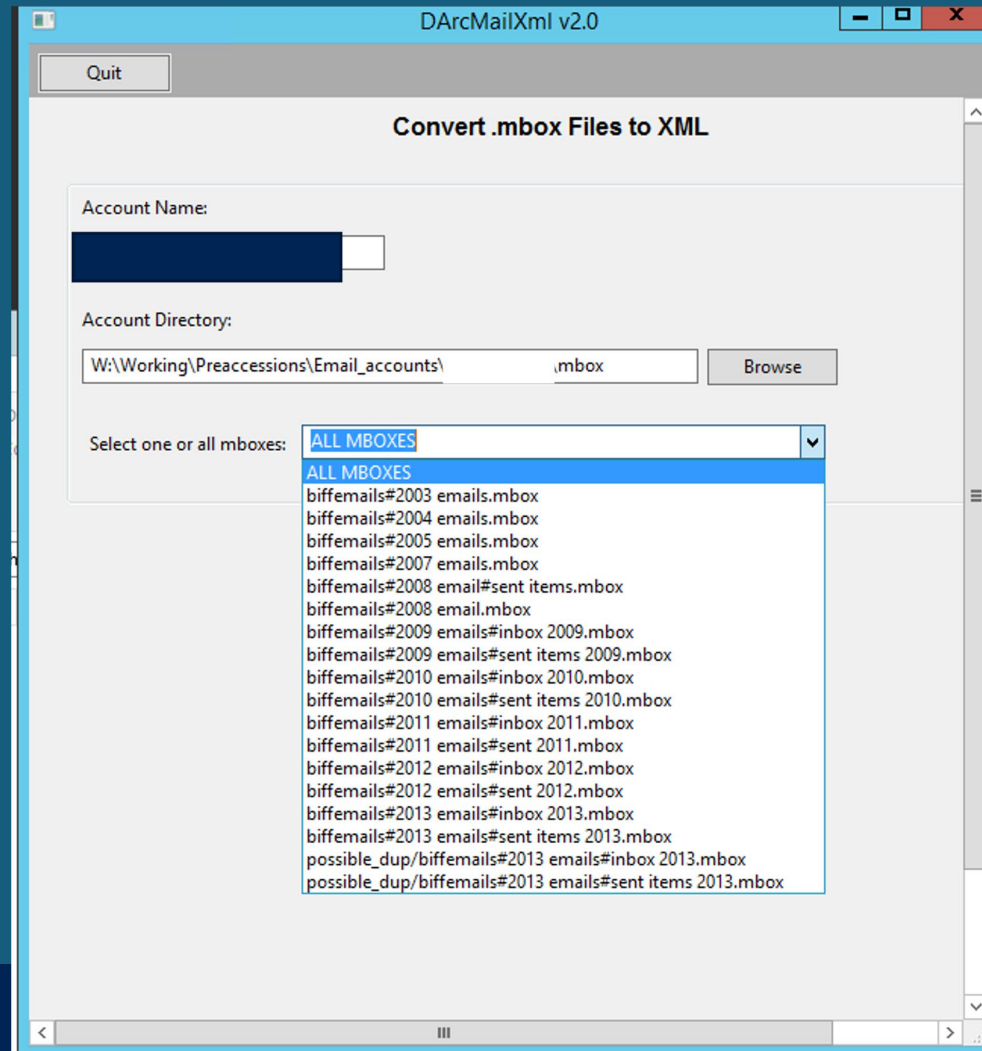
Attachment Name

Body Text

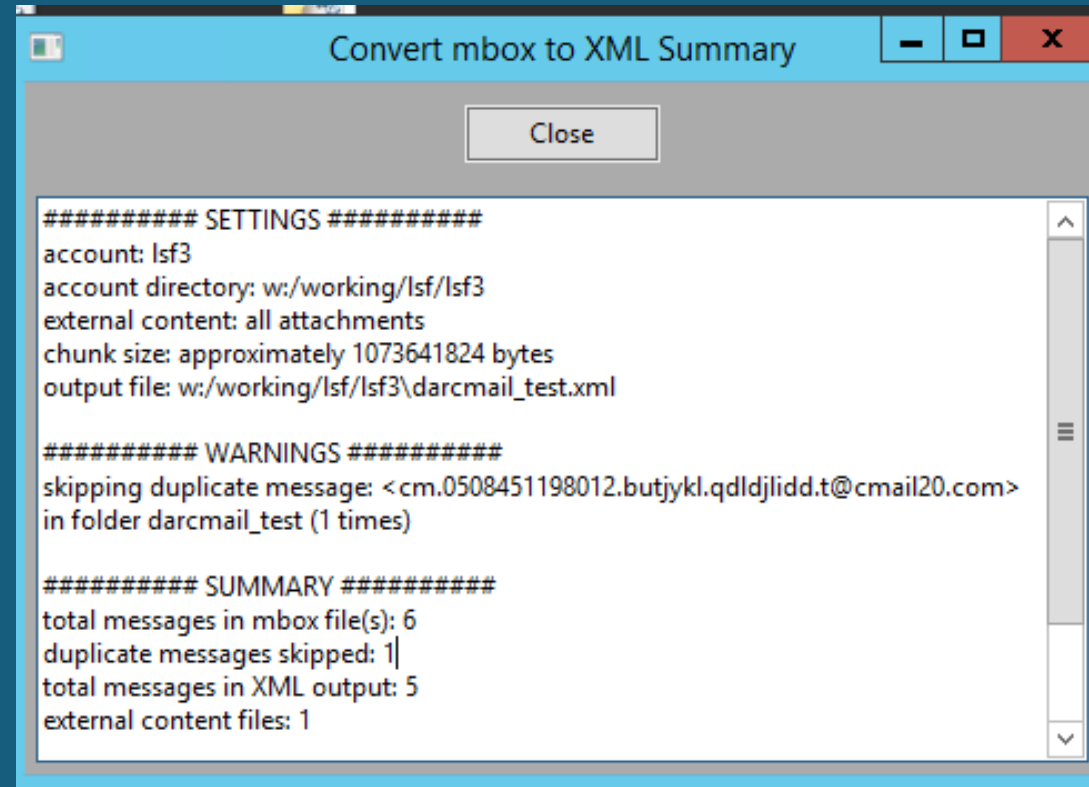
Search body text:  text/plain  text/html

Reset Search for Messages

# DarcMailXml conversion from MBOX to XML



# Log for conversion to preservation XML

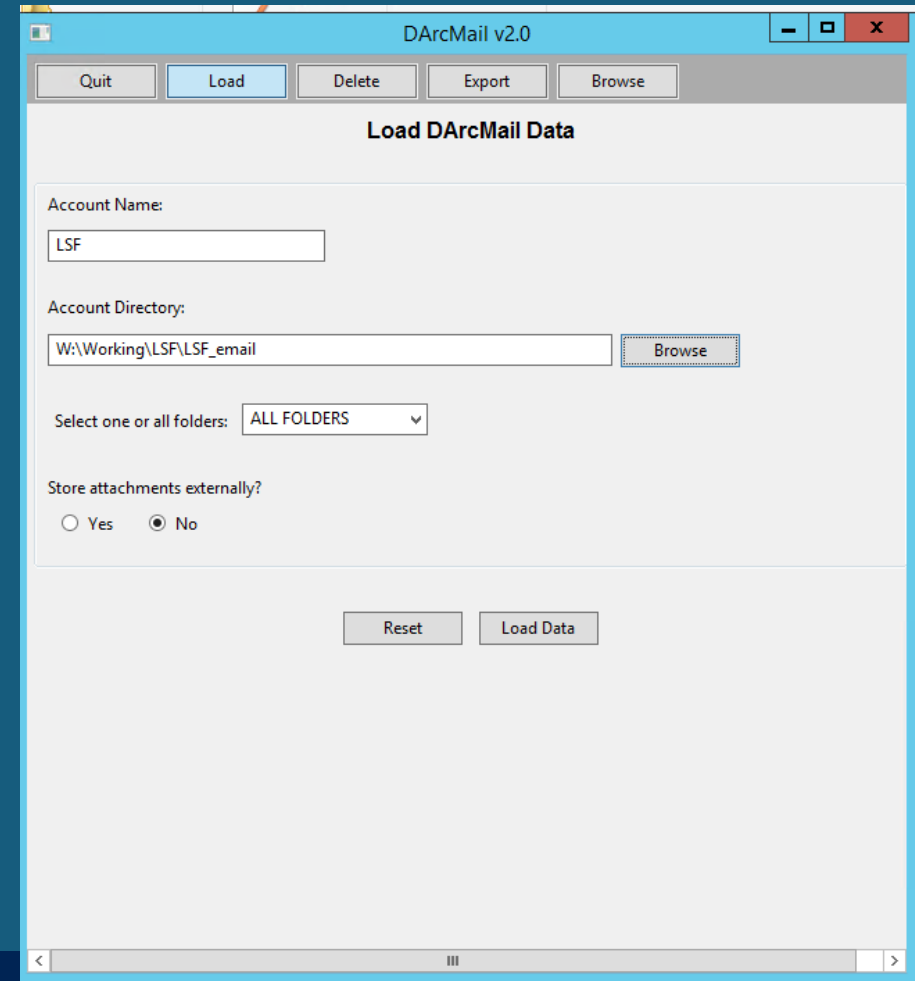
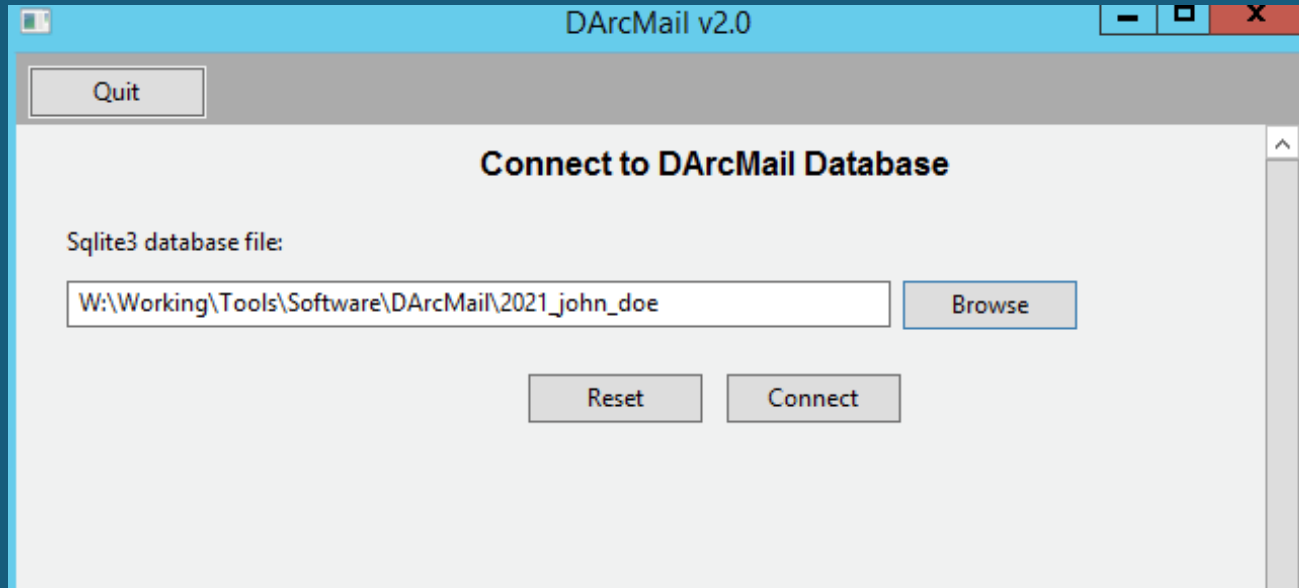


```
##### SETTINGS #####
account: lsf3
account directory: w:/working/lsf/lsf3
external content: all attachments
chunk size: approximately 1073641824 bytes
output file: w:/working/lsf/lsf3\darcmail_test.xml

##### WARNINGS #####
skipping duplicate message: <cm.0508451198012.butjykl.qldjlidd.t@cmail20.com>
in folder darcmail_test (1 times)

##### SUMMARY #####
total messages in mbox file(s): 6
duplicate messages skipped: 1
total messages in XML output: 5
external content files: 1
```

# DArcMail functions



# Review, Access - DArcMail

DArcMail v2.0

Quit Load Delete Export Browse

Account Message Address/Name Results

Sort Order  Oldest first  Newest first  
Message status  Any  Selected  Unselected

Global Id

Date From

Date To

Folder ALL FOLDERS ▾

Subject Line

From Line

To Line

Cc Line

Attachment Name

Body Text

Search body text:  text/plain  text/html

Reset Search for Messages

DArcMail v0.1

Quit Load Delete Browse

Account Message Address/Name Results

1 2 3 4

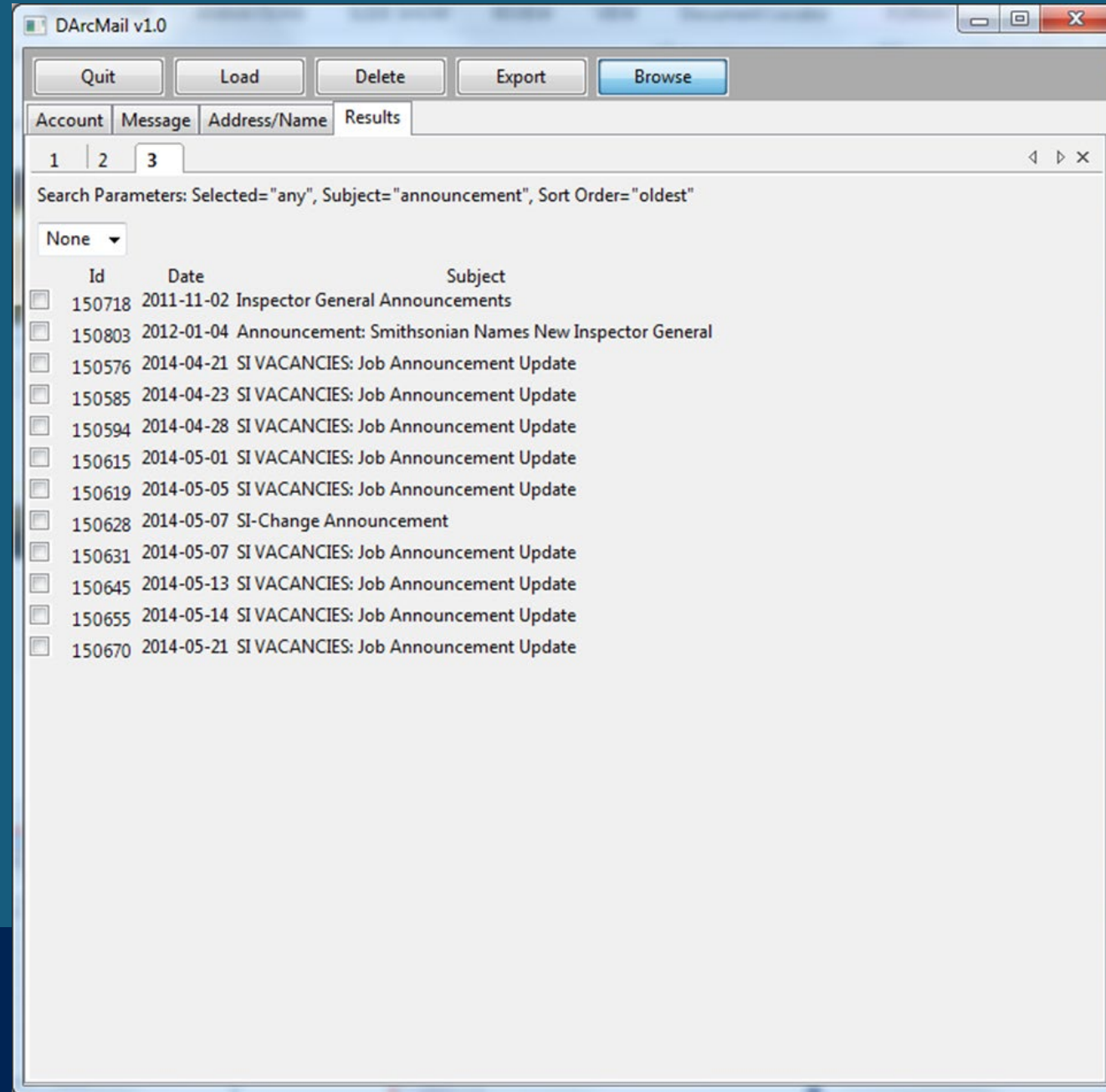
Set Account

Account name Carl\_S  
Id 11  
Account directory C:\EmailParser\Email\_Accounts\Carl\_backup\_messagesave  
Message count 1,226  
First message date 2011-09-17  
Last message date 2014-05-22  
'From' addresses 66  
'To' addresses 97  
'Cc' addresses 44  
'Bcc' addresses 0  
External content files 59

Folders

| Id  | Name            | Messa... | Start Date | End Date   | Relative Path        |
|-----|-----------------|----------|------------|------------|----------------------|
| 359 | Calendar        | 34       | 2011-10-03 | 2014-05-14 | .\Calendar           |
| 360 | DArcInfo Data   | 1        | 2013-05-16 | 2013-05-16 | .\DArcInfo Data      |
| 361 | Data Done       | 43       | 2013-01-04 | 2013-08-15 | .\Data Done          |
| 362 | Deleted Items   | 104      | 2014-04-04 | 2014-05-21 | .\Deleted Items      |
| 363 | Inbox           | 616      | 2011-09-17 | 2014-05-22 | .\Inbox              |
| 364 | Sent Items      | 424      | 2011-09-22 | 2014-05-22 | .\Sent Items         |
| 365 | Suggested Co... | 4        | 2012-12-06 | 2012-12-06 | .\Suggested Contacts |

# Search results



DArcMail v1.0

Quit Load Delete Export Browse

Account Message Address/Name Results

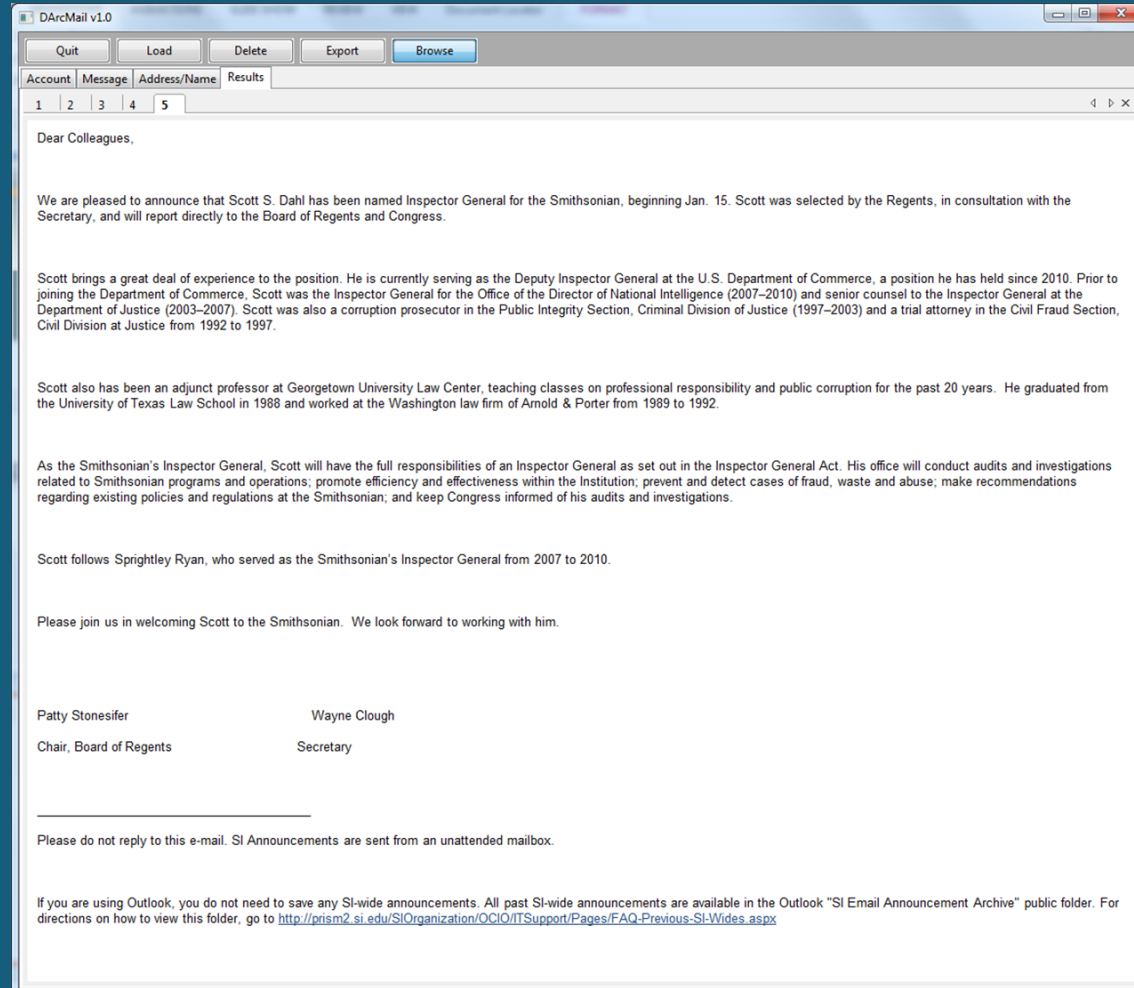
1 2 3

Search Parameters: Selected="any", Subject="announcement", Sort Order="oldest"

None

|                          | Id     | Date       | Subject   |
|--------------------------|--------|------------|---|
| <input type="checkbox"/> | 150718 | 2011-11-02 | Inspector General Announcements                       |
| <input type="checkbox"/> | 150803 | 2012-01-04 | Announcement: Smithsonian Names New Inspector General |
| <input type="checkbox"/> | 150576 | 2014-04-21 | SI VACANCIES: Job Announcement Update                 |
| <input type="checkbox"/> | 150585 | 2014-04-23 | SI VACANCIES: Job Announcement Update                 |
| <input type="checkbox"/> | 150594 | 2014-04-28 | SI VACANCIES: Job Announcement Update                 |
| <input type="checkbox"/> | 150615 | 2014-05-01 | SI VACANCIES: Job Announcement Update                 |
| <input type="checkbox"/> | 150619 | 2014-05-05 | SI VACANCIES: Job Announcement Update                 |
| <input type="checkbox"/> | 150628 | 2014-05-07 | SI-Change Announcement                                |
| <input type="checkbox"/> | 150631 | 2014-05-07 | SI VACANCIES: Job Announcement Update                 |
| <input type="checkbox"/> | 150645 | 2014-05-13 | SI VACANCIES: Job Announcement Update                 |
| <input type="checkbox"/> | 150655 | 2014-05-14 | SI VACANCIES: Job Announcement Update                 |
| <input type="checkbox"/> | 150670 | 2014-05-21 | SI VACANCIES: Job Announcement Update                 |

# Message view



The screenshot shows a web browser window titled "DArcMail v1.0". The interface includes a menu bar with "Quit", "Load", "Delete", "Export", and "Browse" buttons. Below the menu is a navigation bar with "Account", "Message", "Address/Name", and "Results" tabs. A list of messages is shown with page numbers 1 through 5, and the fifth message is selected. The main content area displays the text of the selected message.

Dear Colleagues,

We are pleased to announce that Scott S. Dahl has been named Inspector General for the Smithsonian, beginning Jan. 15. Scott was selected by the Regents, in consultation with the Secretary, and will report directly to the Board of Regents and Congress.

Scott brings a great deal of experience to the position. He is currently serving as the Deputy Inspector General at the U.S. Department of Commerce, a position he has held since 2010. Prior to joining the Department of Commerce, Scott was the Inspector General for the Office of the Director of National Intelligence (2007–2010) and senior counsel to the Inspector General at the Department of Justice (2003–2007). Scott was also a corruption prosecutor in the Public Integrity Section, Criminal Division of Justice (1997–2003) and a trial attorney in the Civil Fraud Section, Civil Division at Justice from 1992 to 1997.

Scott also has been an adjunct professor at Georgetown University Law Center, teaching classes on professional responsibility and public corruption for the past 20 years. He graduated from the University of Texas Law School in 1988 and worked at the Washington law firm of Arnold & Porter from 1989 to 1992.

As the Smithsonian's Inspector General, Scott will have the full responsibilities of an Inspector General as set out in the Inspector General Act. His office will conduct audits and investigations related to Smithsonian programs and operations; promote efficiency and effectiveness within the Institution; prevent and detect cases of fraud, waste and abuse; make recommendations regarding existing policies and regulations at the Smithsonian; and keep Congress informed of his audits and investigations.

Scott follows Sprightley Ryan, who served as the Smithsonian's Inspector General from 2007 to 2010.

Please join us in welcoming Scott to the Smithsonian. We look forward to working with him.

Patty Stonesifer  
Chair, Board of Regents

Wayne Clough  
Secretary

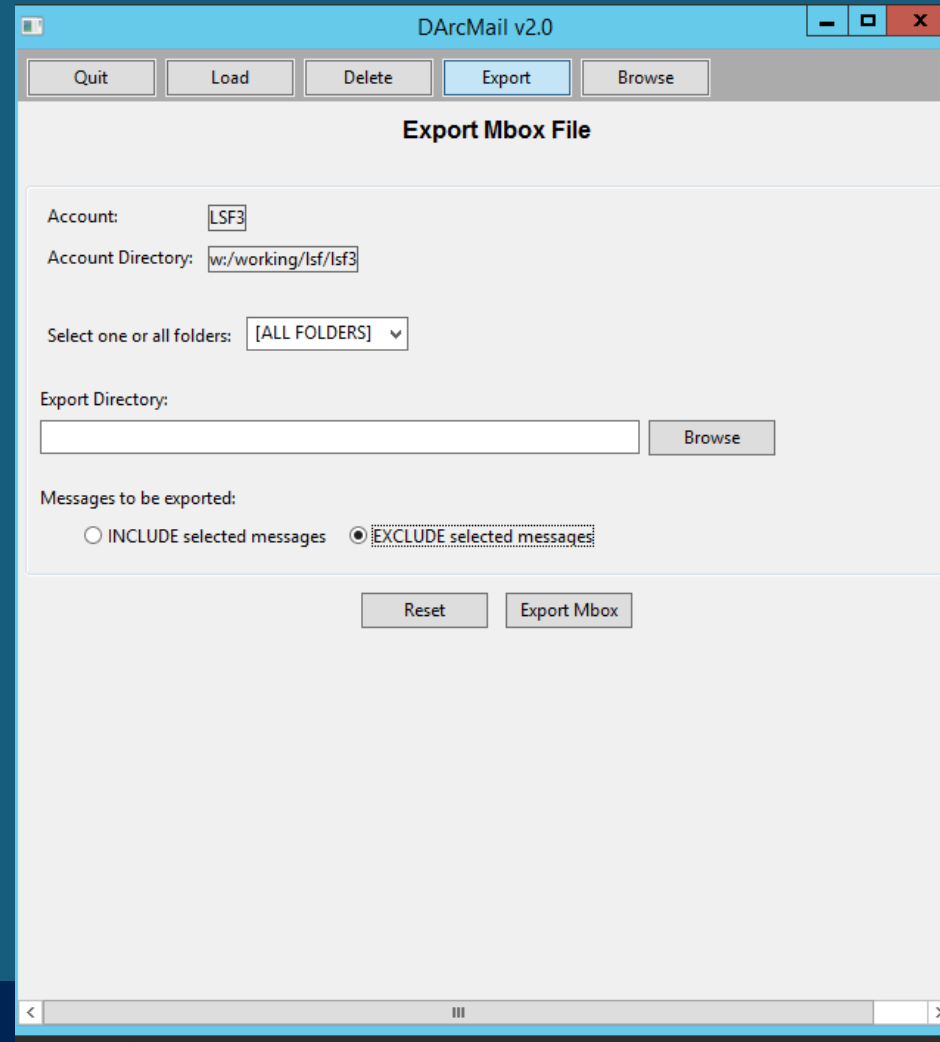
\_\_\_\_\_

Please do not reply to this e-mail. SI Announcements are sent from an unattended mailbox.

If you are using Outlook, you do not need to save any SI-wide announcements. All past SI-wide announcements are available in the Outlook "SI Email Announcement Archive" public folder. For directions on how to view this folder, go to <http://prism2.si.edu/SI/Organization/OCI/OITSupport/Pages/FAQ-Previous-SI-Wides.aspx>



# Export selection to new MBOX file



The screenshot shows the 'Export Mbox File' dialog box in the DArcMail v2.0 application. The window title is 'DArcMail v2.0'. At the top, there are buttons for 'Quit', 'Load', 'Delete', 'Export', and 'Browse'. The dialog box contains the following fields and options:

- Account:** LSF3
- Account Directory:** w:/working/lsf/lsf3
- Select one or all folders:** [ALL FOLDERS] (dropdown menu)
- Export Directory:** (empty text field) with a 'Browse' button to its right.
- Messages to be exported:**
  - INCLUDE selected messages
  - EXCLUDE selected messages

At the bottom of the dialog box, there are 'Reset' and 'Export Mbox' buttons.



# Review, Access - ePADD

The screenshot displays the ePADD Appraisal interface. At the top, there is a navigation bar with the logo and menu items: Import, Browse, Search, Export, and Save. A search bar on the left contains the text "si email ann... (1519)". Below the search bar, there are sections for "Correspondents" (listing Davis, Leslie, Lee, Yong, Burke, Sheila, Burrell-Jone, and lawrencemal...), "Annotations" (Not annotated), "Attachment type" (none, pdf, asf), and "Folders" (Small\_non-re...). The main content area shows an email header with the following details: Date: June 12, 2003 8:15am; From: "small, lawrence" <small@si.edu>; To: "Davis, Leslie" <DavisL@si.edu>, "Lee, Yong" <LeeY@si.edu>; Subject: **Fwd: Important message from RSAN**; ID: 825ae0456b23a354258073799d4cbd417f2e0671cf4692043dac205b1d8e57b1 (Link). The email body contains a weather advisory from the National Weather Service for the District of Columbia, mentioning a severe Thunderstorm Watch and heavy rain. The advisory is sent via an email account. The footer of the email states it was sent by Edward Solomon to all users via email devices through the Roam Secure Alert Network.



# 2020s

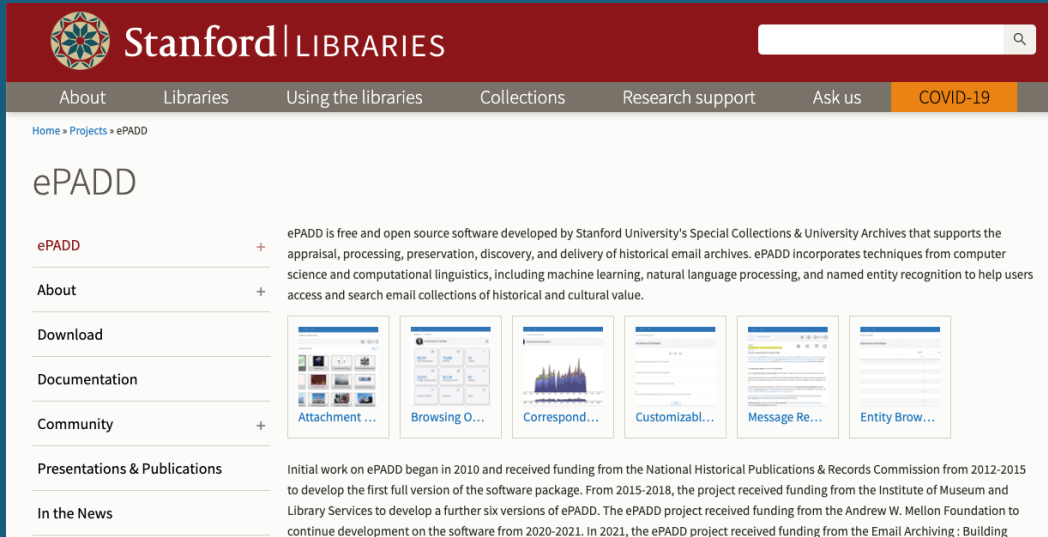
- Larger accounts
- More people leaving  
= more accessions
- Virus scan tool discontinued

*National Postal Museum,  
Accession Number: A.2006-34*



**Smithsonian**  
*Libraries and Archives*

# Email Projects/Events/Reports



**Stanford LIBRARIES**

About Libraries Using the libraries Collections Research support Ask us COVID-19

Home » Projects » ePADD

## ePADD

**ePADD** + ePADD is free and open source software developed by Stanford University's Special Collections & University Archives that supports the appraisal, processing, preservation, discovery, and delivery of historical email archives. ePADD incorporates techniques from computer science and computational linguistics, including machine learning, natural language processing, and named entity recognition to help users access and search email collections of historical and cultural value.

**About** +

**Download**

**Documentation**

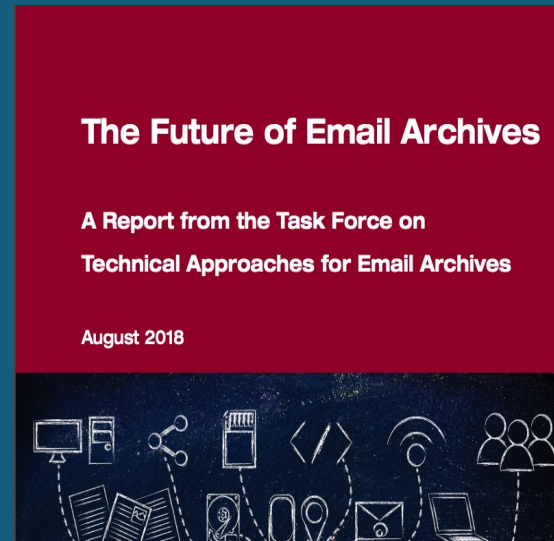
**Community** +

**Presentations & Publications**

**In the News**

Attachment ... Browsing O... Correspond... Customizabl... Message Re... Entity Brow...


Initial work on ePADD began in 2010 and received funding from the National Historical Publications & Records Commission from 2012-2015 to develop the first full version of the software package. From 2015-2018, the project received funding from the Institute of Museum and Library Services to develop a further six versions of ePADD. The ePADD project received funding from the Andrew W. Mellon Foundation to continue development on the software from 2020-2021. In 2021, the ePADD project received funding from the Email Archiving: Building



## The Future of Email Archives

**A Report from the Task Force on Technical Approaches for Email Archives**

August 2018



## RATOM

### Review, Appraisal, and Triage of Mail

Home **About** Tools and Code Presentations ML4ARC Hackathon Project

#### About

The Review, Appraisal, and Triage of Mail (RATOM) project is developing software to assist archives and other collecting organizations with email analysis, selection, and appraisal tasks. The project extends the email processing capabilities currently present in the TOMES software and BitCurator environment, developing additional modules for these tools along with select standalone software to support more advanced workflows.

These include identifying and reporting on entities present within emails and email attachments using a scalable NLP library; identifying materials requiring redaction or review due to the presence of potentially sensitive information; and developing software modules to assist with preparation of materials for release and public access.



**LIBRARY OF CONGRESS**

Everything Search Loc.gov

FILM, VIDEO

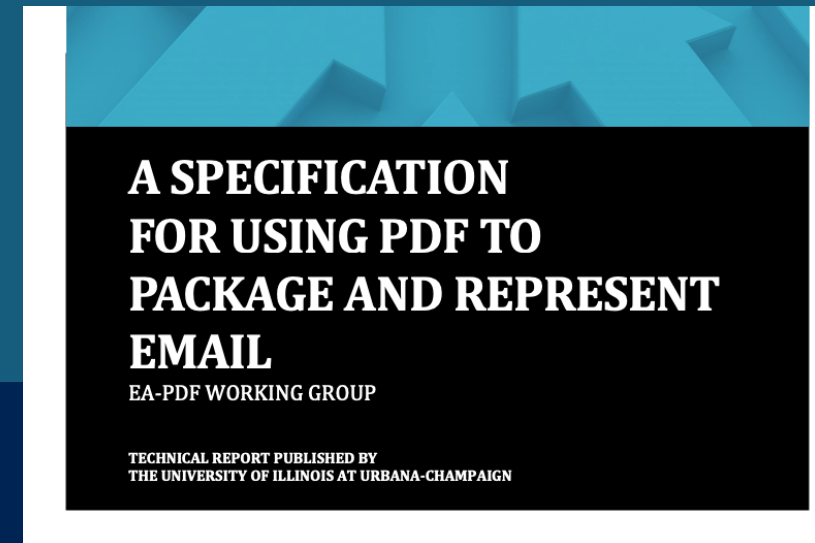
### Archiving Email: Institutional Approaches to Processing & Archiving Email

CO-HOSTED BY THE LIBRARY OF CONGRESS AND THE NATIONAL ARCHIVES AND RECORDS ADMINISTRATION

**Archiving Email Symposium: Technical Perspective: Institutional Approaches to Processing and Archiving Email**

Various Speakers

June 2, 2015

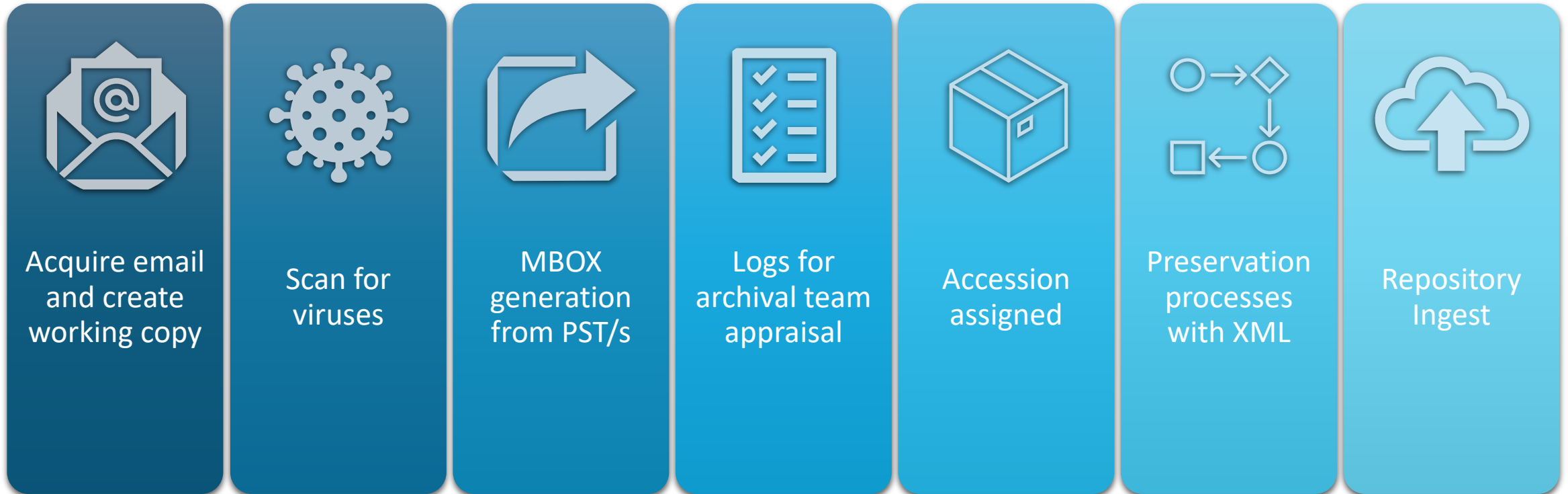


## A SPECIFICATION FOR USING PDF TO PACKAGE AND REPRESENT EMAIL

EA-PDF WORKING GROUP

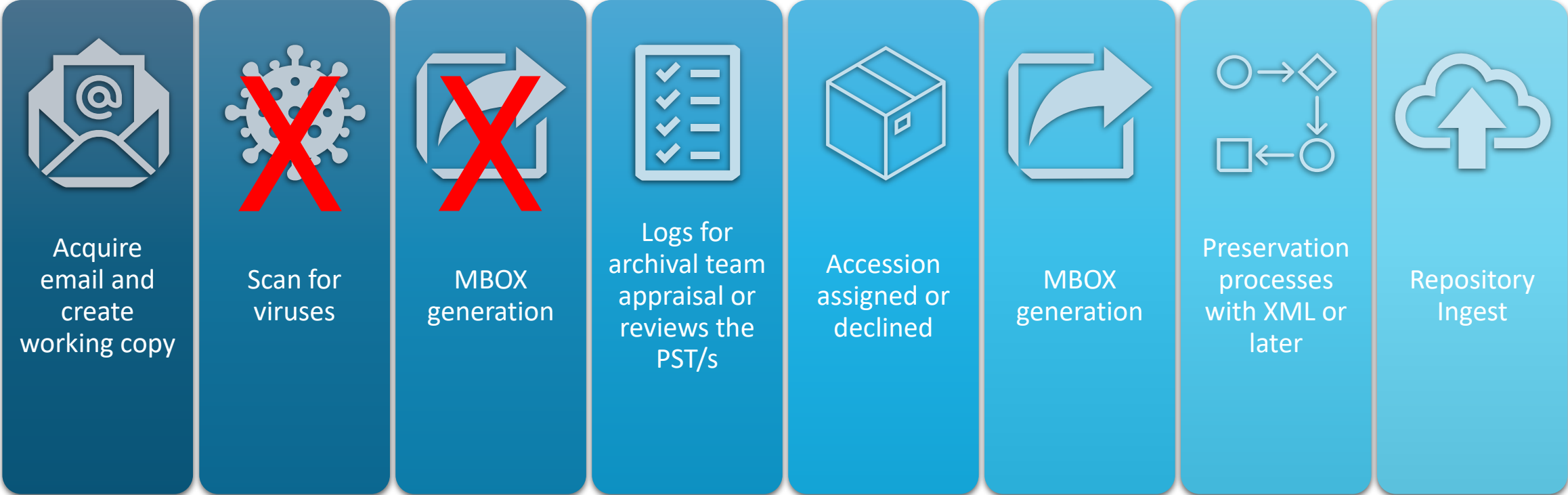
TECHNICAL REPORT PUBLISHED BY THE UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

# Previous workflow



*Bottleneck here due to time to take to complete*

# Current workflow



# Other tools

libpst Utilities - Version 0.6.76

## libpst Utilities - Version 0.6.76

### Packages

The various source and binary packages are available at <http://www.five-ten-sg.com/libpst/packages/>. The most recent documentation is available at <http://www.five-ten-sg.com/libpst/devel/>.

A [Mercurial](http://hg.five-ten-sg.com/libpst/) source code repository for this project is available at <http://hg.five-ten-sg.com/libpst/>.

This version can now convert both 32 bit Outlook files (pre 2003), and the 64 bit Outlook 2003 pst files. Utilities are supplied to convert email messages to both mbox a for use with many of the [CT Summation](#) products. Contacts can be converted to a simple list, to vcard format, or to ldif format for import to an LDAP server.

The [libpff](#) project has some excellent documentation of the pst file format.

#### Table of Contents

- [readpst](#) — convert PST (MS Outlook Personal Folders) files to mbox and other formats
- [listpst](#) — list PST (MS Outlook Personal Folders) file data
- [pst2ldif](#) — extract contacts from an MS Outlook .pst file in .ldif format
- [pst2dii](#) — extract email messages from an MS Outlook .pst file in DII load format
- [outlook.pst](#) — format of MS Outlook .pst file

|       | A     | B                         | G   | H |
|-------|-------|---------------------------|---|---|
| 20172 | Email | Date: 2014-09-30 17:49:18 | Subject: Board RSVPs  |   |
| 20173 | Email | Date: 2014-09-30 16:45:53 | Subject: LATEST version of All-staff remarks and all slides too                               |   |
| 20174 | Email | Date: 2014-09-30 15:56:40 | Subject: Daily News Report September 30, 2014   |   |
| 20175 | Email | Date: 2014-09-29 20:09:02 | Subject: Speech for All staff   |   |
| 20176 | Email | Date: 2014-09-29 17:25:47 | Subject: FW: FORD'S THEATRE: Lincoln Assassination Artifact Exhibition, March 23-MAY 25, 2015 |   |
| 20177 | Email | Date: 2014-09-29 10:45:16 | Subject:  |   |
| 20178 | Email | Date: 2014-09-29 07:58:27 | Subject: Fwd: USC INSTALLATION REMARKS.pdf  |   |

The screenshot shows the OpenRefine web interface. At the top, it says "OpenRefine \_log.txt" with a "Permalink" link. Below that, there's a "Facet / Filter" section with "Undo / Redo 0 / 0" buttons. A "Using facets and filters" panel on the left explains how to use facets and filters. The main area displays a table of 29009 rows. The table has columns for "All", "Column 1", and "Column 2". The rows contain email data, including IDs (e.g., 2751, 2752, 2753), types (Email), dates, and "From:" fields. The interface also shows options to "Show as: rows records" and "Show: 5 10 25 50 rows".



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# ePADD today – Now accepting PSTs!

The screenshot shows the ePADD website homepage. At the top, there is a navigation bar with the ePADD logo and the text "Email Archiving Tool". The main navigation links are "Home", "About", "Using ePADD", "Resources", and "Community". The main header features the large text "ePADD" and the subtitle "Email Processing, Appraisal, Discovery, Delivery (and Preservation!)". Below this, a paragraph describes ePADD as free and open source software developed by Stanford University's Special Collections & University Archives, supporting the appraisal, processing, preservation, discovery, and delivery of historical email archives. The page includes four main sections: "Download and Install" with the ePADD logo, "User Guide" with a book icon, "Emailchemy for ePADD" with a purple cone and @ symbol icon, and "Get Involved" with a network of people icon. The footer contains a "Contact ePADD Project" button, social media icons for GitHub, YouTube, and Twitter, and a "Join ePADD User Listserv" button.

Email Archiving Tool

Home About Using ePADD Resources Community

# ePADD

## Email Processing, Appraisal, Discovery, Delivery (and Preservation!)

ePADD is free and open source software developed by Stanford University's Special Collections & University Archives that supports the appraisal, processing, preservation, discovery, and delivery of historical email archives. ePADD incorporates techniques from computer science and computational linguistics, including machine learning, natural language processing, and named entity recognition to help users access and search email collections of historical and cultural value.

[Download and Install](#)

[User Guide](#)

[Emailchemy for ePADD](#)

[Get Involved](#)

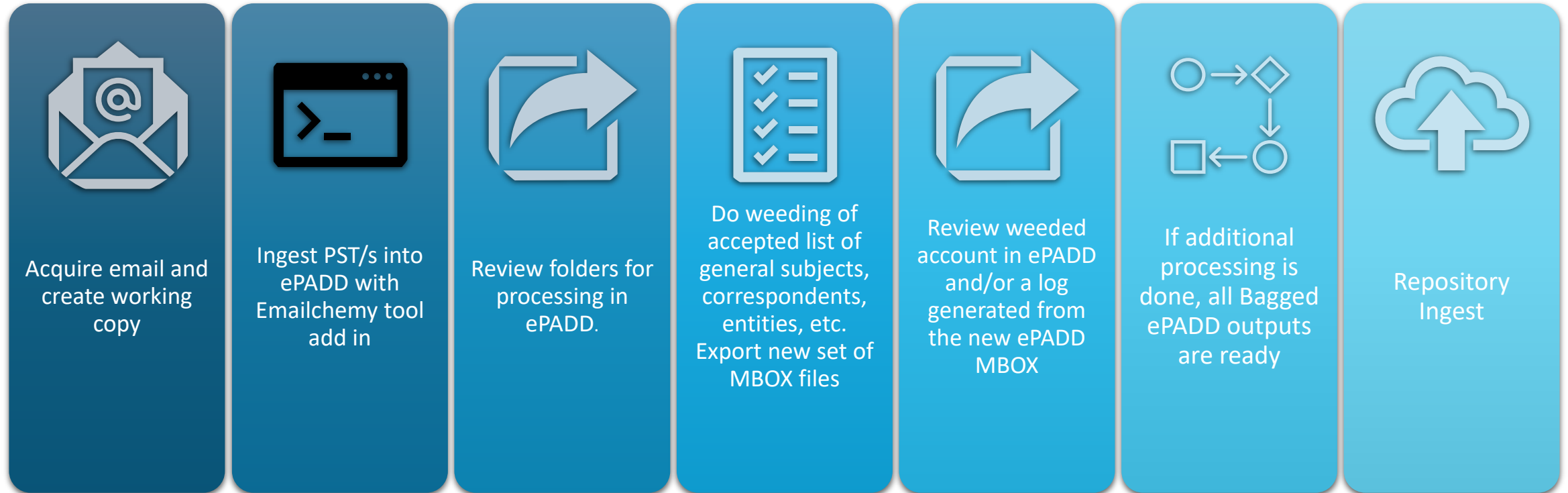
Contact ePADD Project

Join ePADD User Listserv



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# Potential workflow





The screenshot shows the ePADD Import interface. At the top, there is a blue header with the ePADD logo and the word "Import". A question mark icon is in the top right corner. Below the header, a grey box displays a progress bar and the text "(8 folder(s), 13142 message(s), 3068101 KB)". Inside this box, there are two columns of folder selection options, each with a checkbox:

- Archive (26)
- Deleted Items (394)
- Drafts (43)
- Admin info (1)
- Inbox (493)
- Junk E-Mail (154)
- Library Books (1)
- Sent Items (12030)










Below these options is a button labeled "SELECT ALL FOLDERS" with a folder icon. In the bottom right corner of the interface, there is a blue button labeled "NEXT →".

- **Don't transfer directories**
  - **Junk**
  - **Personal**
  - **Personnel**
  - **Deleted Items – sometimes \***

Profile picture placeholder (black box) | All Messages | Help icon

11.5 GB account

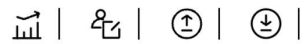
More than 53,000 messages

|   |   |  |
|---|---|--|
| <br><b>6,600</b><br>Correspondents     | <br><b>2,877</b><br>Entities         | <br><b>9</b><br>Labels      |
| <br><b>45,052</b><br>Image Attachments | <br><b>62,285</b><br>All Attachments | <br><b>1,237</b><br>Folders |
| <br>Lexicon Search                   | <br>Reports                        | <br>More                  |

# Weeding – do not transfer

Appraisal | Correspondents

  All Messages 



Search:  Show  entries

| Name                         | Sent Messages | Received Messages | Received from Owner |
|------------------------------|---------------|-------------------|---------------------|
| SI Email Announcements       | 298           | 4                 | 3                   |
| SI Email Announcements Prism | 0             | 1                 | 0                   |

Showing 1 to 2 of 2 entries (filtered from 6,600 total entries)

[Previous](#) [Next](#)

# Selecting Items

Date: Jun 2, 2010 4:20pm

From: **SI Email Announcements** <siannounce@si.edu>

To: "SI-GEO-FtPierce, FL" <si-geo-ftpierce@si.edu>, SI-GEO-National Capital Region <si-geo-ncr@si.edu>, SI-GEO-NYC All Sites <si-geo-nyc@si.edu>, "SI-GEO-NZP-SCBI Front Royal, VA" <si-geo-nzp-scbi@si.edu>, SI-GEO-Remote Locations <si-geo-remotelocations@si.edu>, SI-GEO-SAO All Sites <si-geo-sao@si.edu>, "SI-GEO-SERC Edgewater, MD" <si-geo-serc@si.edu>, SI-GEO-STRI Panama <si-geo-stri@si.edu>

Subject: **Consortia for World Cultures Idea Fair**

Dear Colleagues:

We are moving forward with the development of the ideas or themes that will vitalize the activities and projects of the Consortia as envisioned in the Smithsonian Strategic Plan. One of the suggestions that emerged was to conduct idea fairs that would allow for "bottom-up" emergence of pan-institutional collaborative projects in support of the Consortia.

LABELS ▾ SORT BY ▾ ATTACHMENT VIEW

Do not Transfer

Date: Jun 2, 2010 4:20pm

From: SI Email Announcements <siannounce@si.edu>

To: "SI-GEO-FtPierce, FL" <si-geo-ftpierce@si.edu>, SI-GEO-National Capital Region <si-geo-ncr@si.edu>, SI-GEO-NYC All Sites <si-geo-nyc@si.edu>, "SI-GEO-NZP-SCBI Front Royal, VA" <si-geo-nzp-scbi@si.edu>, SI-GEO-Remote Locations <si-geo-remotelocations@si.edu>, SI-GEO-SAO All Sites <si-geo-sao@si.edu>, "SI-GEO-SERC Edgewater, MD" <si-geo-serc@si.edu>, SI-GEO-STRI Panama <si-geo-stri@si.edu>

Subject: **Consortia for World Cultures Idea Fair**

Dear Colleagues:

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# ePADD Bag

The screenshot displays a Windows File Explorer window with the following details:

- Address Bar:** /:/ > Preaccessions > Email\_accounts > [Redacted] > ePADD archive of Smithsonian Institution Archives
- File List (Main Window):**

| Name                   | Date modified     | Type          | Size   |
|------------------------|-------------------|---------------|--------|
| data                   | 2/23/2023 4:52 PM | File folder   |        |
| .DS_Store              | 2/23/2023 4:53 PM | DS_STORE File | 7 KB   |
| bag-info.txt           | 2/23/2023 2:58 PM | Text Document | 1 KB   |
| bagit.txt              | 2/23/2023 2:50 PM | Text Document | 1 KB   |
| manifest-md5.txt       | 2/23/2023 2:58 PM | Text Document | 325 KB |
| manifest-sha256.txt    | 2/23/2023         |               |        |
| tagmanifest-md5.txt    | 2/23/2023         |               |        |
| tagmanifest-sha256.txt | 2/23/2023         |               |        |
- File List (Secondary Window - 'data' folder):**

| Name             | Date modified     | Type          | Size  |
|------------------|-------------------|---------------|-------|
| blobs            | 2/23/2023 2:45 PM | File folder   |       |
| exportableAssets | 2/23/2023 4:53 PM | File folder   |       |
| indexes          | 2/23/2023 2:43 PM | File folder   |       |
| lexicons         | 2/23/2023 1:53 PM | File folder   |       |
| sessions         | 2/23/2023 2:50 PM | File folder   |       |
| .DS_Store        | 2/23/2023 4:52 PM | DS_STORE File | 7 KB  |
| epaddPremis.xml  | 2/23/2023 2:39 PM | XML Document  | 22 KB |



# First Impressions

- PSTs into ePADD – not complete. Calendar?
- CSVs don't have subject line – but it's coming
- Directory/subdirectory structure not retained on import into ePADD
- Orcids and Sharepoint URLs flagged as CCNs. Finding SSNs

The screenshot displays the Aid4Mail Converter application window titled "Project-004 - Aid4Mail Converter". The interface is divided into several sections:

- Sessions List:** A table on the left shows four sessions. Session 4, "Session-001", is currently "Processing" at 29% completion. The other sessions are "Ready" at 0%.
- Session-001 Details:** The right pane shows the progress for Session-001. It includes a "Total progress" bar for 6,218 of 21,675 items (29%) and a "Current folder" bar for 333 of 967 items (34%).
- Status:** The overall status is "Processing".
- Item overview:**

|            |       |
|------------|-------|
| Completed: | 6,209 |
| Skipped:   | 8     |
| Errors:    | 8     |
- Folder overview:**

|            |    |
|------------|----|
| Processed: | 15 |
| Skipped:   | 0  |
| Errors:    | 0  |
- Time/speed:**

|             |               |
|-------------|---------------|
| Processing: | 1m 03s        |
| Speed:      | 25.97 MB/s    |
| Average:    | 99.35 items/s |
- Items skipped:**

|              |   |
|--------------|---|
| Unpurged:    | 0 |
| Incremental: | 0 |
| Invalid:     | 0 |
| Unprocessed: | 8 |
- Folders skipped:**

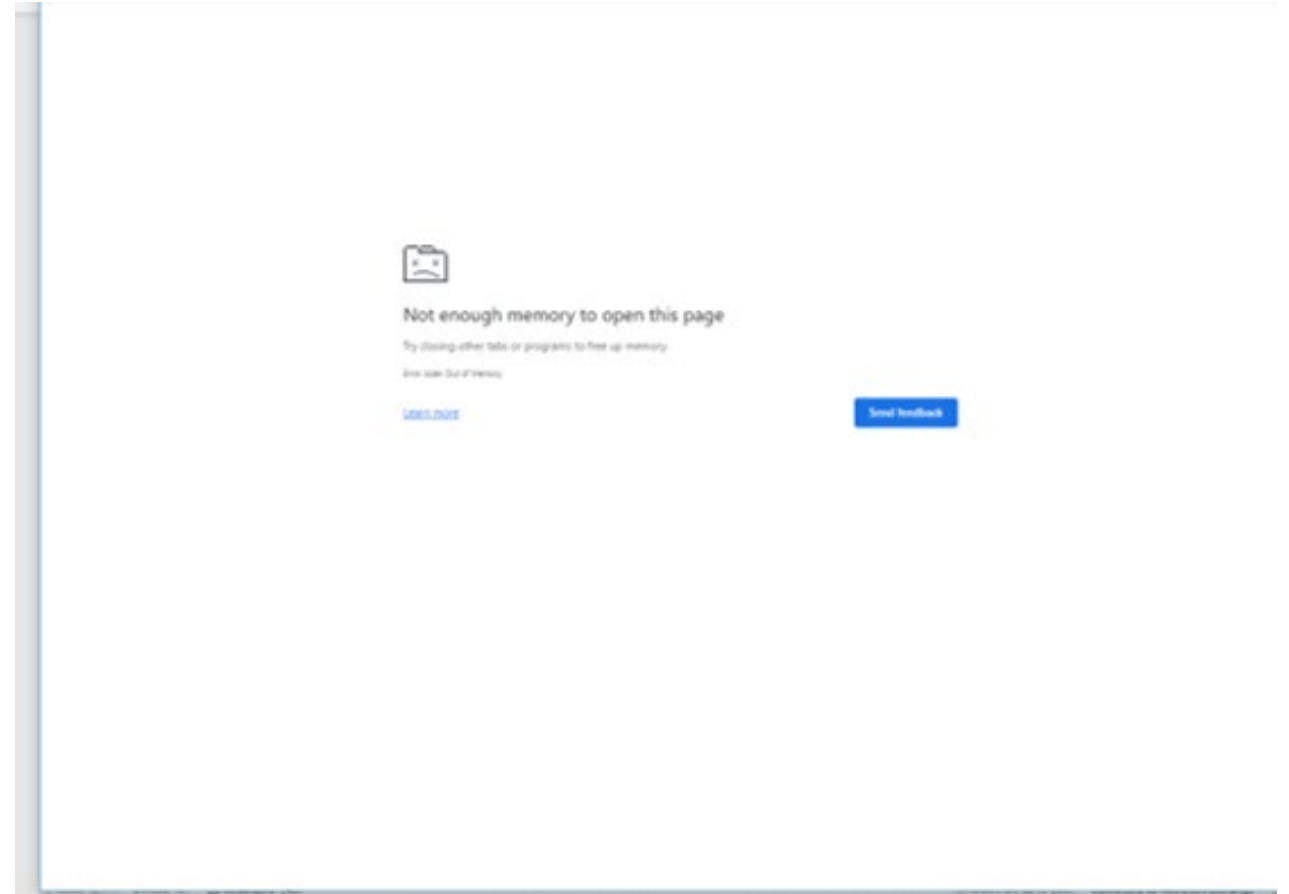
|              |   |
|--------------|---|
| Filtered:    | 0 |
| Incremental: | 0 |
| Invalid:     | 0 |
| Unprocessed: | 0 |
- Errors:**

|         |   |
|---------|---|
| Source: | 8 |
| Target: | 0 |
| Other:  | 0 |

At the bottom, there are navigation buttons for "Previous" and "Next", a "4/4" indicator, and a "Zoom: 100%" dropdown.

# First Impressions

- Accounts larger than 40 GB have crashed – revisit
- Some formatting issues in the messages. Nature of email though
- Faster way to review and “weed” for final version. 😊
- Appraising archivist – likes the ease of use and the authorities in processing module.



# Moving ahead



Where do the other previous tools fit in?



New release coming that will have the subject in the CSV.

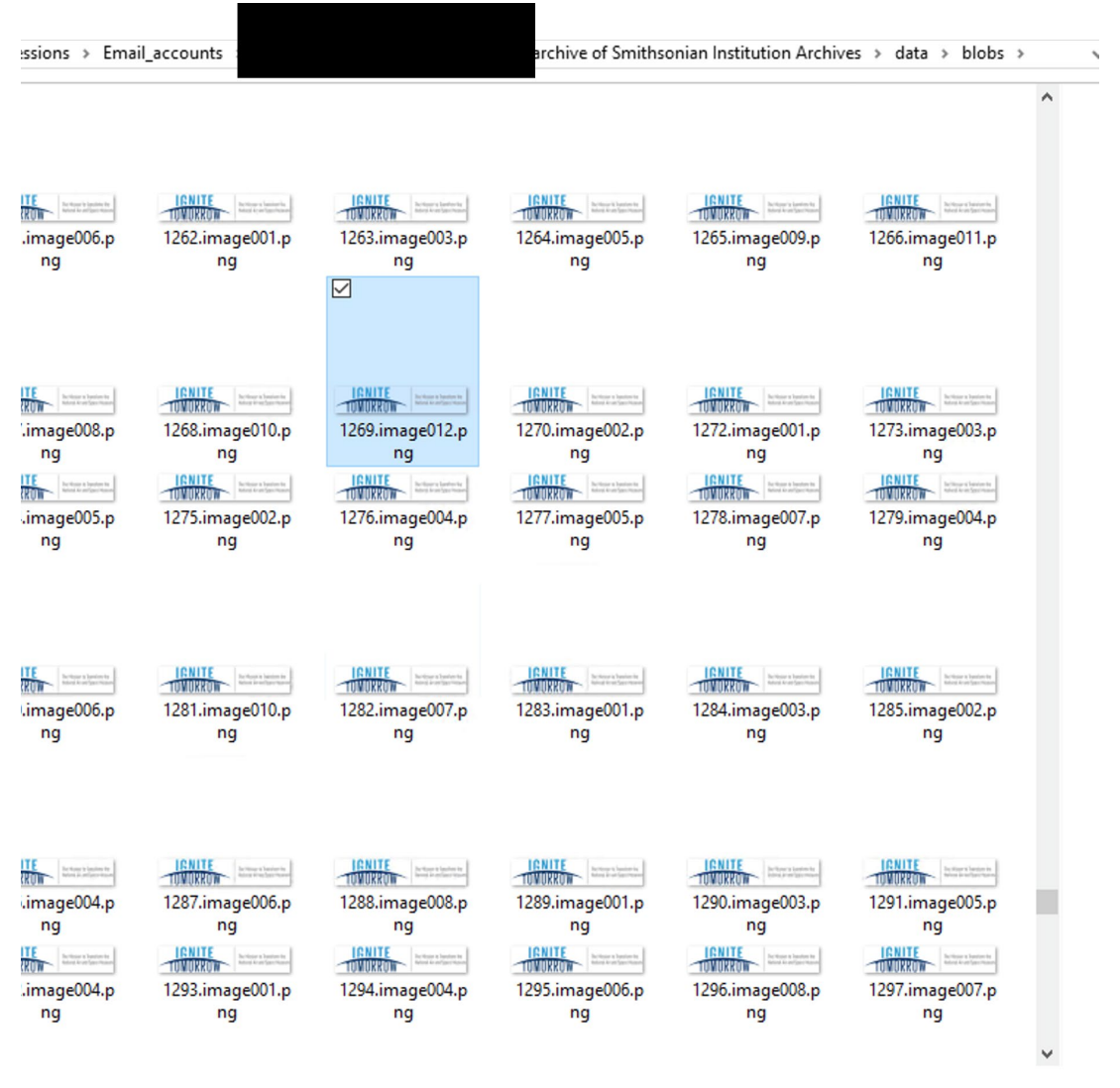


Tradeoff – willing to live without those Calendar items showing up for appraisal?

How will tasks and calendar items be preserved?



Appraisal – will the archivists want to learn ePADD for reviewing? Or back to the logs?



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Thank you!

Questions?

[schmitzfuhrigl@si.edu](mailto:schmitzfuhrigl@si.edu)

or @LyndaLSF



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